



Oakley Green, Fifield & District Community Action Plan

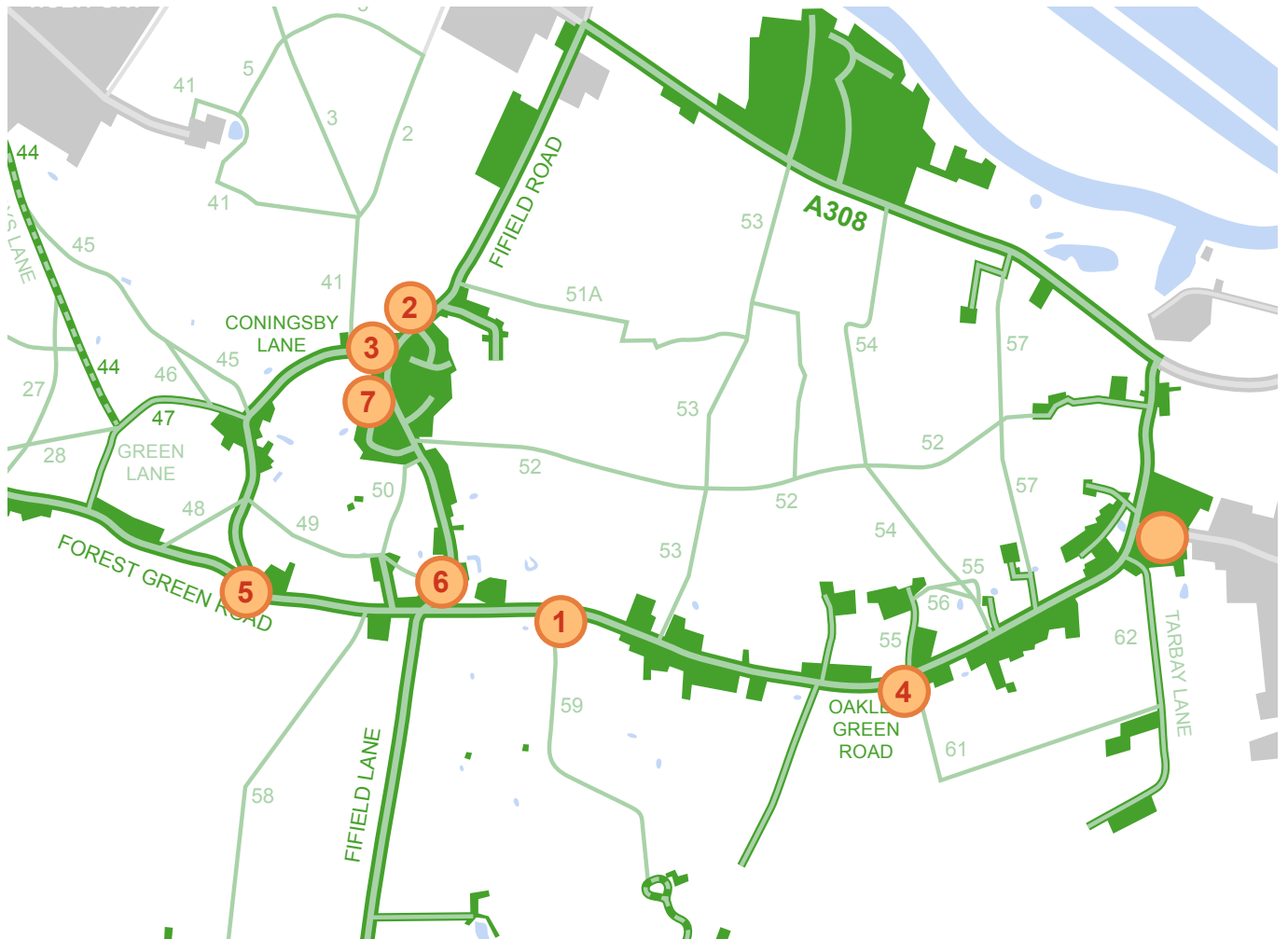
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Environment

Eight Wet Spots

Drainage report 03

07.08.2009



Eight “Wet Spots” - with the easiest first

- 1 - Cricket Ground - Oakley Green Road
- 2 - The area of the speed hump - Fifield Road
- 3 - The Coningsby Lane shambles
- 4 - Oakley Green House and Forest Farm area - Oakley Green Road
- 5 - Ledger Farm - Coningsby Lane (south) and Forest Green Road
- 6 - The Fifield Inn - Fifield Road (south)
- 7 - Culvert under road at Chapel - Fifield Road
- 8 - Cardinal & Hand Clinics - Oakley Green Road & Dedworth Road

The following pages contain detailed reports on each of these situations in turn along with tentative suggestions of possible approaches for improvement.

These reports have been produced using local knowledge contributed by residents, observation of the ground, and detailed survey information on underground pipes etc kindly provided by Streetcare.

In all cases any further progress is only possible after detailed discussions with Landowners and Streetcare.

The first 2 situations are already in progress and we intend to carry the remaining 6 forward to the Community Action Plan in an attempt to achieve an improvement in the short and long term over the coming years.

1 - Cricket Ground - Oakley Green Road

Pipes leading north across the cricket ground have been cleaned by Streetcare. The inspection chamber under the fence line is scheduled to be rebuilt during the school summer holidays.

Even when the work is done we will need to wait for the next extreme weather to decide if this has cured or improved the situation or if further work will be necessary to improve the flow northward.



2 - The area of the speed hump - Fifield Road

The ditch on the western side of Fifield Road shown as **A** has been reasonably maintained in recent years but unfortunately the section shown as **B** has not been cleared for many years and has become increasingly unviable to the point where it now doesn't function at all.

As a result there is no escape for water dammed by the speed hump.

Streetcare have been in the process of attempting to contact the owner of the field. If the ditch is not reinstated by the Autumn it has been agreed that OGAFCAP can deploy volunteers and will be supplied with any relevant data on underground services.

We have requested and are currently waiting for an update from Streetcare on this situation. We feel that this is a "wet spot" that can easily be cured in the short term without the necessity of submitting proposals as part of the Community Action Plan.



3 - The Coningsby Lane shambles

Water flows eastward along the ditches on either side of Coningsby Lane (A).

The ditch on the southern side of the Lane can only escape via a 6 inch pipe (B) into the grounds of Willow Creek to join water coming from the south to the culvert under the Fifield Road. In times of extreme weather this pipe can no longer handle the volume of water and the ditch backs up.

On the northern side of the Lane the installation of a new driveway without a culvert when the Mulberries was built interrupted the flow along a ditch running north (C). This ditch has long since become silted up and overgrown. Water on the northern side of the Lane therefore has nowhere to go.

Consequently both roadside ditches eventually overflow onto the Lane and the water flows eastward past the cottages and houses to form the familiar frequent lake at the junction with the Fifield Road (D).

A ditch that must once have continued along the north side of the Lane to the Fifield Road and round the corner to head north obviously disappeared a very long time ago although a short stretch remains and now acts as a sort of sump at D. The current situation does not allow for a ditch to be reinstated to take this water round the corner and northward and in any case the ground rises into Fifield Road at this junction which is why the lake forms here. So any ditch would need to be very deep at this point and road and verge widths are far too restricted to accommodate that.

So another route needs to be found to allow water to find its way out of this cul de sac.

Trying to reinstate the ditch at C would involve a large amount of disruption and cost as a new large pipe would need to be installed under the driveway of the Mulberries and the clearance of the trees and

undergrowth now filling this old route would be a daunting and destructive undertaking. There is now even a stile across the line of this old ditch.

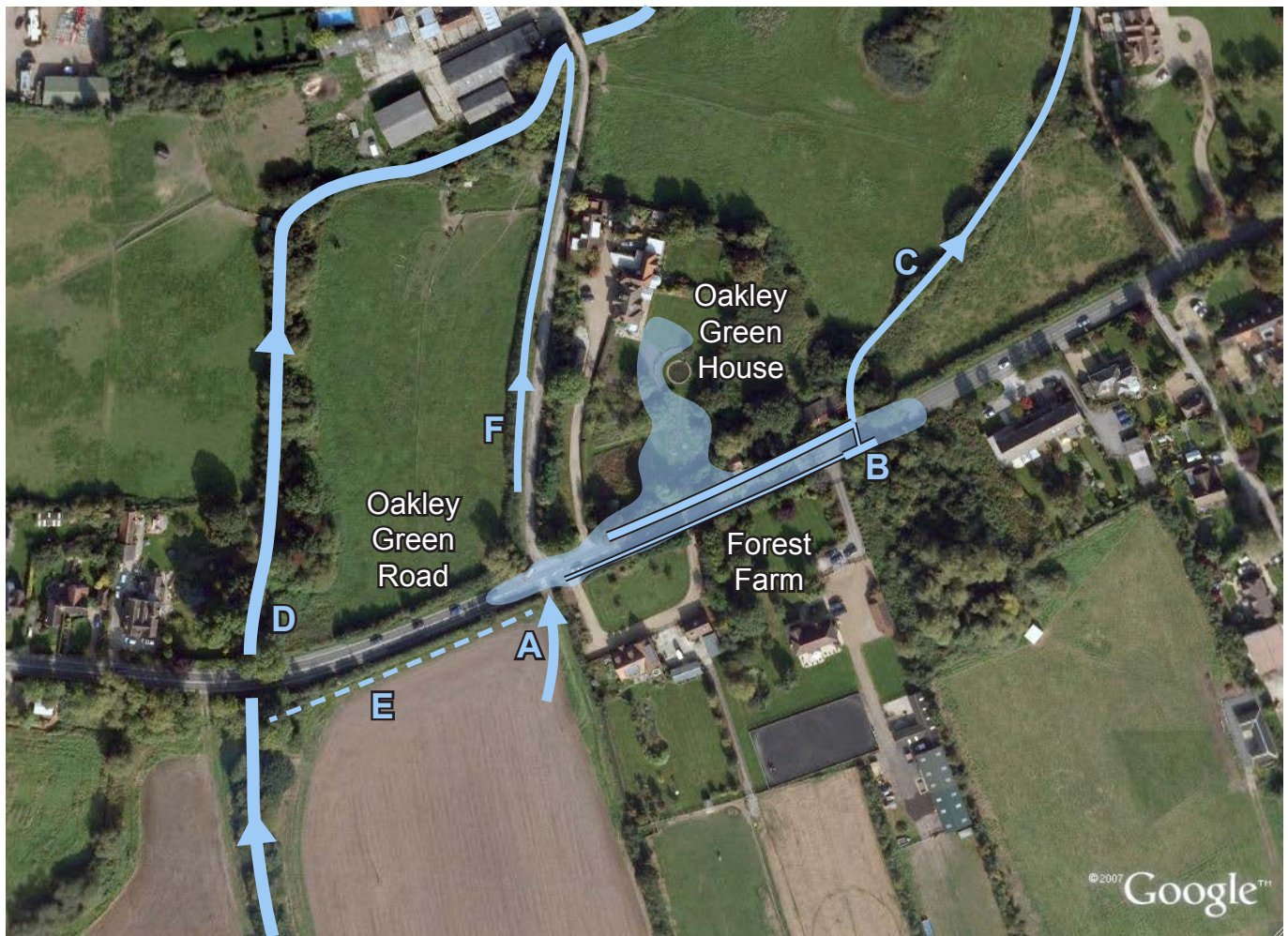
So the most viable proposition seems to be a new ditch running north (**E**) to join an existing route (**F**). This existing route has been surveyed in the past and found to be viable as long as Biffa increased the depth of a short section. This was done at the time and would now only need two items of work to improve it.

A rather small and old pipe that crosses under the footpath (**G**) would need to be replaced with a larger diameter new pipe and a blockage (**H**) needs to be cleared. This could be done manually as access for a digger at this spot is not practical.

Finally a route for excess water in the ditch on the south side of the Lane would need to be provided by installing a new culvert (**J**) allowing water to pass from the south to the north side of the Lane.

Streetcare have indicated that they are not opposed to this proposal and would be willing to cooperate. The route for the proposed new ditch (**E**) runs along the edge of a field owned and operated by Coningsby Farm and we are currently trying to arrange discussions to discover the views of the owners. If they are unhappy about this and a way cannot be found to make it acceptable to them then the reinstatement of the original route north (**C**) will have to be revisited although this is a more complex, costly and destructive option as discussed above.

We intend to pursue this proposal as part of the Action Plan as a short term project for implementation during 2010.



4 - Oakley Green House and Forest Farm area - Oakley Green Road

In times of extreme weather the problem at this location stems from large volumes of water flowing out of a field entrance (A).

On the south side of the road a few gullies take water into a small diameter pipe running east under the footway to exit into a small ditch at B, where a small, shallow culvert leads under the road into a watercourse (C). Water from the properties south of the road also runs into this small diameter sub footway pipe.

An insubstantial ditch starting at the drive entrance to Oakley Green House runs east along the north side of the road with small culverts under entrances and leading also to the watercourse (C).

These two insubstantial drainage routes simply cannot cope with the sheer volume of water flowing out of the field in times of very heavy rainfall. As a result the road becomes flooded, and as part of the grounds of Oakley Green House are lower than the road the water recently left a tide mark on the exterior wall of the house.

It is initially tempting to think that as a major watercourse route (D) runs north via a large double culvert under the road not far to the west that this might offer some sort of solution. Unfortunately the ground rises slightly between A and D. The landowner has tried to improve things by installing an underground pipe (E) which falls to the route of D. This has turned out to be almost counterproductive. Although the watercourse at D is of considerable depth it becomes full and at these times water backs up the pipe. If this pipe is still operational consideration may need to be given to blocking it as it is exactly at those times that more water arriving at A needs to be avoided !

Another possibility might be to investigate the viability of installing some sort of grid and sump at

entrance **A** with an underground pipe from this leading north under the road to an existing ditch (**F**). The ground rises for a section between these two points and a survey would need to establish how far along ditch **F** such a pipe would need to reach. The ditch would also need upgrading as it is fairly shallow in this area.

Minimum short term measures would require :

- 1 - Doubling the diameter (at least) of the sub footway pipe on the south side of the road and increasing the depth of the ditch where this exits (**B**).
- 2 - Increasing the number of gullies that feed into this pipe, particularly at the western end near the field entrance - possibly even considering starting the pipe from an entrance grid and sump at the entrance.
- 3 - Replacing the road culvert crossing north under the road at **B** to feed into watercourse **C** with one of much larger diameter.
- 4 - Increasing the width and depth of the ditch running along the north side of the road, ensuring that all pipes under entrances are of substantial diameter, and ongoing maintenance of this route to the watercourse (**C**).

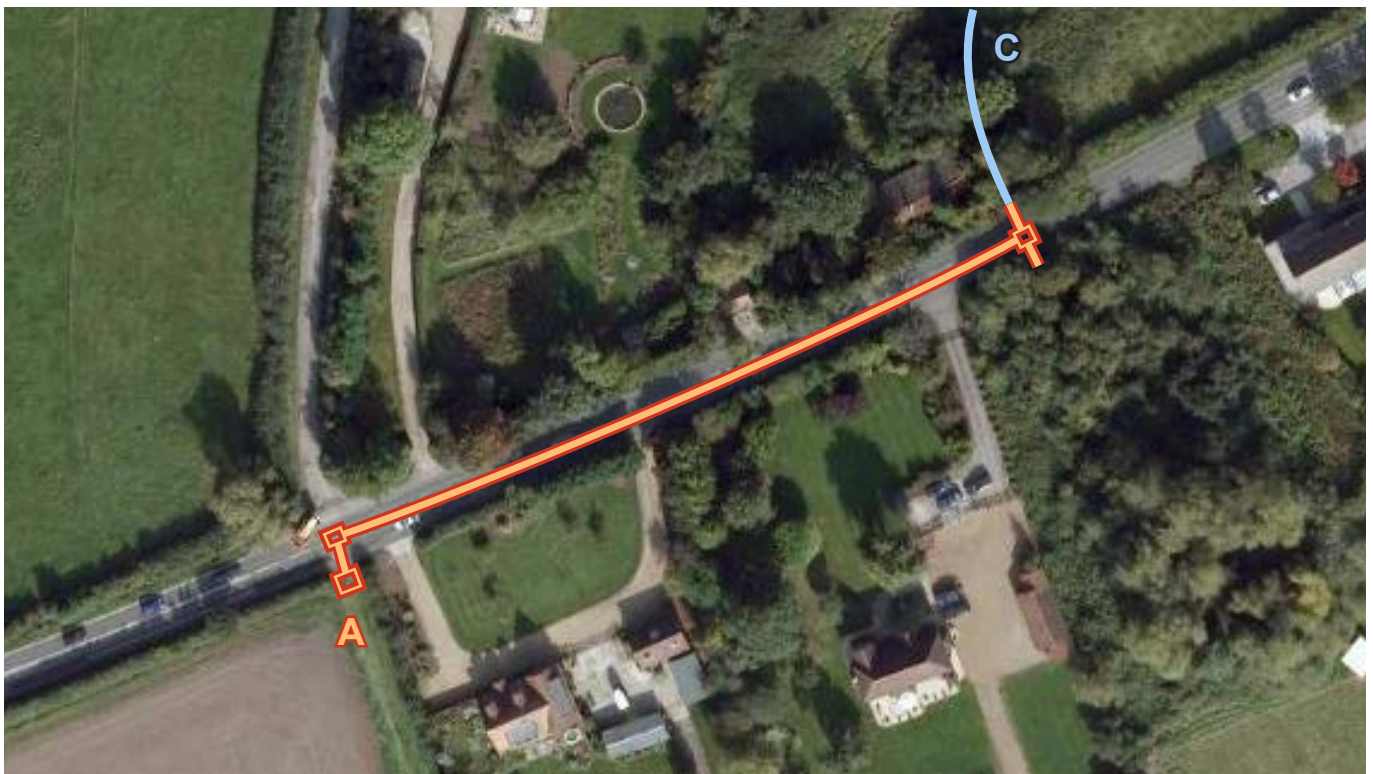
Further consideration ...

might include establishing a sizeable pond in the corner of the field (A) with the intention of holding back some of the water coming off the field in extreme weather and piping an overflow into the pipe system at **1** and **2** above. The landowner has pointed out that to be viable this would need to be impractically large.

The ultimate long term measure ...

would entail the installation of a major storm drain under this section of Oakley Green Road starting at a grid and sump arrangement at entrance **A** and leading out into watercourse **C**.

Even the least of all these possibilities will involve funding and substantial work so we intend to arrange discussions with the landowner and Streetcare to formulate detailed proposals for implementation in the short to mid term 2010-2011.





5 - Ledger Farm - Coningsby Lane (south) and Forest Green Road

Water flows down from the Drift Road higher ground heading north (**A**). The original route took it directly under the road through a 30cm pipe into the pond (**B**) at Ledger Farm and then on northward to join the ditch at the northern boundary. In times of extreme weather Ledger Farm suffered frequent flooding of the pond and have now installed a valve on the northern side of Forest Green Road to allow them to shut off the flow into the pond.

The only remaining outlet now becomes the 30cm underground pipe (**C**) running north under the eastern verge of Coningsby Lane which exits at a manhole (**D**) and flows east along the boundary ditch and then north under the footpath to arrive eventually at the culvert under Fifield Road at the old chapel.

At these times the capacity of the pipe system is simply too restricted and water collects in a large ditch (**E**) inside the hedge line to the south of the road. This contains a large quantity of water throughout the year, even during the summer months.

From the west the ditch to the south of the road is culverted to join the northern ditch and then into a depression on the corner of Coningsby Lane which becomes a pond in winter (**F**). Water from here flows north along the ditch on the west side of Coningsby Lane.

In times of extreme weather the water in the “sump” ditch (**E**) south of the road overflows and flows out through the entrance (**G**) to flood the road junction. More water also flows off the track and through the entrance onto the road. Gullies in the road at the junction take this water into the pipe (**C**).

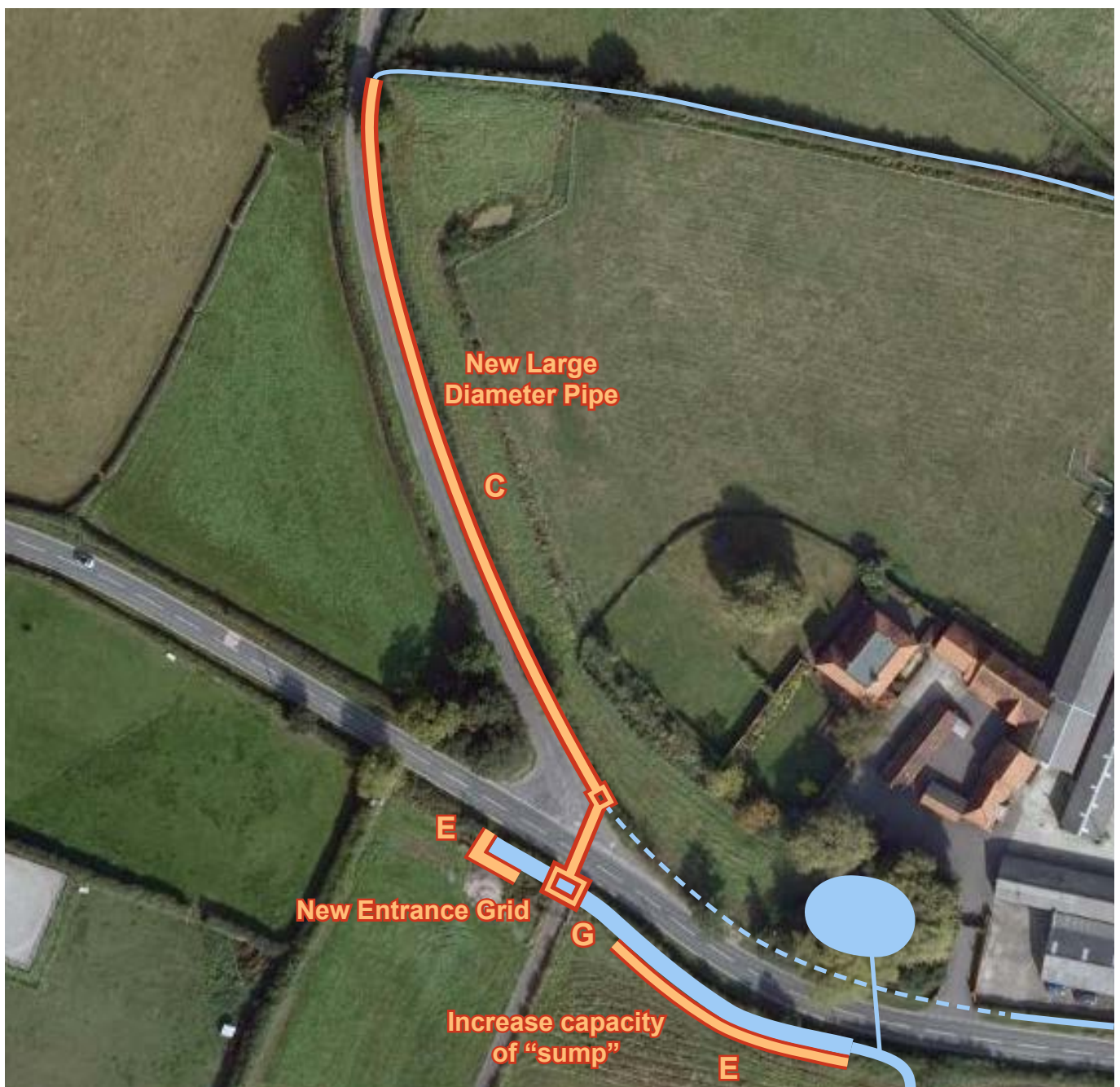
At the very least this pipe (**C**) needs to be thoroughly cleaned along its complete length and the gullies properly cleared. But this alone will never solve the problem. A 30cm or 12 inch pipe is never going to be capable of handling all this volume of water. Ideally all this pipework system needs to be replaced

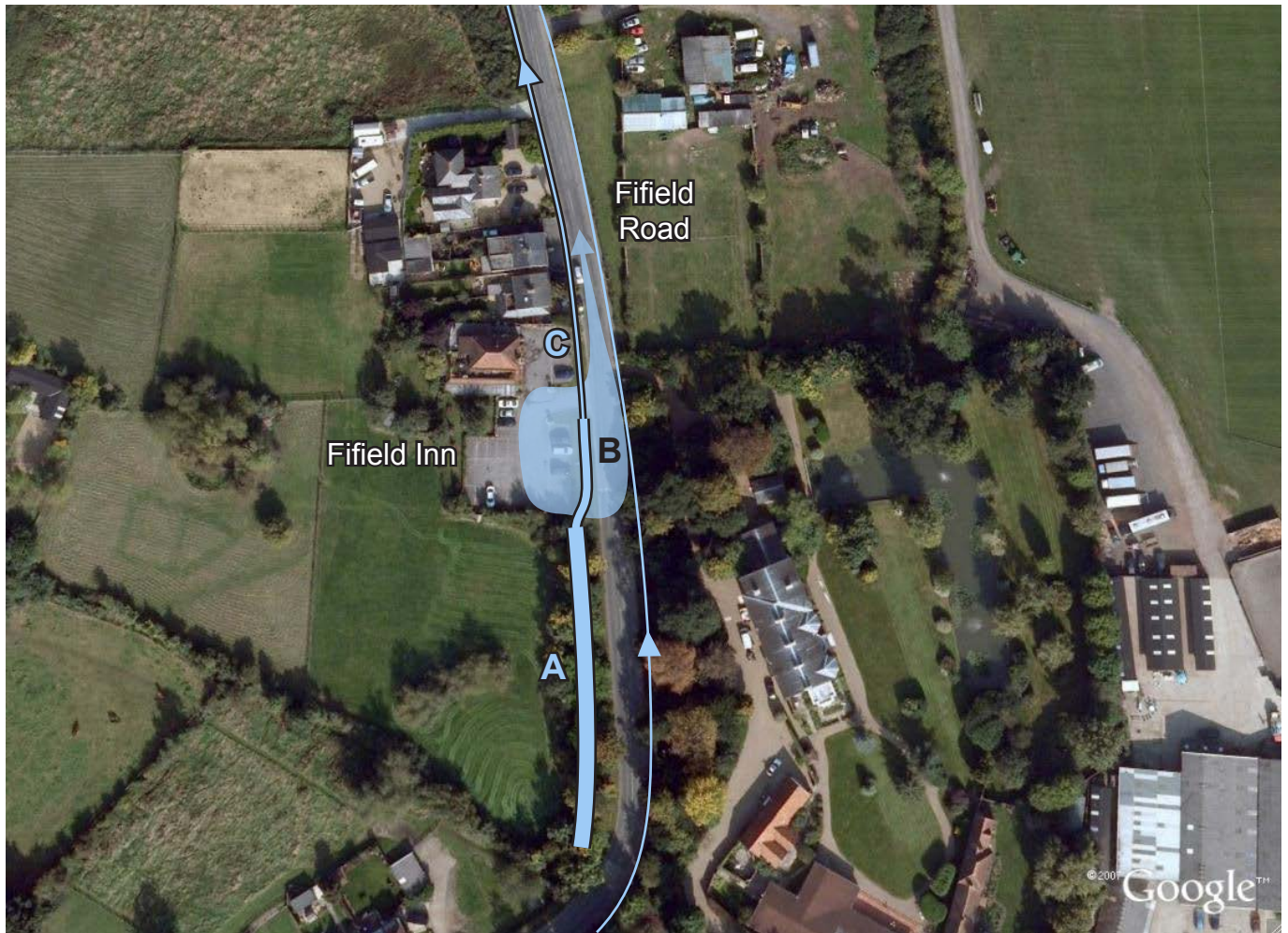
with pipes of at least double the capacity. Unfortunately the eastern verge of Coningsby Lane is not wide enough to take a ditch. An open ditch is far more flexible in capacity and easier to maintain than an underground pipe.

A proper long term solution might be :

- 1 - Increase the capacity of the “sump” (E).
- 2 - Install a grid crossing at entrance (G).
- 3 - From beneath the grid at the entrance take a LARGE diameter culvert (or a pair) to the eastern corner of Coningsby Lane to a manhole chamber.
- 4 - Replace Pipe (C) with one of at least 60cm or more.

We will arrange discussions with the Landowner and Streetcare to agree proposals for the Action Plan which we will pursue for implementation in the mid term 2011-2012.





6 - The Fifield Inn - Fifield Road (south)

Water coming off the field to the west of Fifield Road collects at **A**. This contains water all year round and at times of high rainfall overflows into the ditch (**B**) between the pub car park and the road. From this a pipe runs north under the entrance to the car park and along the Fifield Road (**C**).

Inevitably the volume of water eventually exceeds the capacity of the pipe and the ditch overflows into the car park and onto the road where it gushes its way north trying to get down the gullies into the pipes on both sides of the road.

All this water above and below the road heads north to join all the rest at the culvert at the old chapel.

Options

1 - Increase the capacity to hold water at **A**. By excavating and extending this as much as possible the overflow might at least be delayed. This will need discussions with the landowner and it might be possible to improve this further by the excavation of a pond at the south east corner of the field.

2 - Increase the capacity of the route north (**C**). This is obviously costly and disruptive and the ultimate solution to this and all the problems along the Fifield Road is a large diameter storm drain that starts here and runs all the way north to exit in the roadside ditch north of Longlea Nursing Home.

We will pursue discussions with Landowners and Streetcare aiming to formulate proposals for implementation in the mid to long term 2012 and beyond.



7 - Culvert under road at Chapel - Fifield Road

Several drainage routes converge from both south and west at a single culvert under the Fifield Road at the old Chapel turning what is normally a stream through the front garden of *Willow Creek* into a large pond (**A**) in times of heavy rainfall. 60 years ago or more this really was a full time pond and there was a small road bridge allowing a substantial northward outflow (**B**).

The largest volume flows north in a ditch (**C**) bringing all the water from Ledger Farm and the junction of Forest Green Road and Coningsby Lane (south) and the run-off from the fields on the way - all looking for an escape northward. There appears to be no direct connection to a pond near its route (**D**) and it might be worth investigating the possibility of delaying some of the northward flow by making use of this. It is probable however that this pond becomes very quickly full as a sump from the surrounding ground which becomes very quickly saturated.

A field drainage ditch (**E**) contributes a little more but it is not clear how much of this finds its way into a nearby pond (**F**). Once again this probably fills very quickly and by the time relief is required is probably no help.

Sub footway pipes on both sides of Fifield Road (**G**) bring yet more flow northward carrying water from the Fifield Inn ditch and overflow as well as from several gullies either side of the road. On the Eastern side of the road the pipe exits into a short length of open ditch (**H**) at the site of the old Hare and Hounds, then another pipe takes it on northward to join the culvert under the road. It is not clear what happens to the pipe on the western side of the road at this point but it may also continue north to join the culvert.

The ditch on the south side of Coningsby Lane tries to get through a 6 inch pipe (**I**) to join in the fun, and from the gullies at the end of Coningsby Lane another pipe (**J**) joins the culvert. At one time this used to back up when the culvert was at full capacity, contributing even more to the lake at the end of Coningsby

Lane. In response to a report on the Coningsby Lane problem in 2002 one way valves were added which has prevented pressure back-up into the lane. But until the culvert reaches its capacity this pipe (J) still adds to the volume of liquid in the culvert.

Summary

All water trying to head north through the village and from the west of the village as far as Green Lane arrives at this one culvert.

Inevitably there are times when water ends up flowing along Fifield Road. In the past this has been sufficiently deep to damage car engines and certainly to threaten properties.

Options

There are very few !

1 - Attempt to hold back the flow at various points by creating sumps to delay the overwhelming volume at the culvert. It is not clear where these could be without extensive discussions with landowners who might understandably not be too happy at losing what might usually be productive land.

2 - Increase the capacity of the culvert. This would in effect entail reinstating a more open style of road bridge. It would also require a lot of attention to be devoted to the route north (B) to ensure that it was capable of handling an increased volume so that the problem is not simply shifted onto somewhere else. It would probably be necessary to carry out extensive works to build walls to some of the route so that the sides could be vertical to cope with much more volume.

3 - Find other possible additional alternative routes to cross the Fifield Road further south to take some of the flow east and north. This would require extensive survey work and negotiations with landowners etc.

4 - Instal a very large capacity storm drain running from the Fifield Inn to north of Longlea Nursing Home to exit into the ditch on the east side of Fifield Road.

All very costly and long term undertakings that nevertheless we will investigate through discussions with landowners and Streetcare for the long term 2012 and beyond.



8 - Cardinal & Hand Clinics - Oakley Green Road & Dedworth Road

A substantial ditch (A) runs down the slope of Tarbay Lane on its eastern side. It is not clear what happens to the water that must run down this route in extreme weather. When the ground levels as the lane turns west to join Oakley Green Road the ditch becomes far less significant and stops at the road.

By various routes (B) significant volumes of water find their way to a low point on the Dedworth Road. The road rises slightly in both directions so the roadside ditches are also feeding water to this point (C).

Culverts under the road take all this water into two routes in the grounds of the Cardinal and Hand Clinics. These join to continue north then west (D) to finally exit the property and head north towards the A308 (E). This route is substantial and well maintained but despite this the grounds suffer frequent and extensive flooding. Although the onward route north (E) is not so substantial it is not clear that improving this would relieve the problem entirely. The sheer volume of water trying to pass through the site would still overcome the system.

This whole area becomes generally saturated to the extent that the Greene Oak (F) experience water rising in their cellar regularly and the ground floor is threatened by surface water in the car park.

This is probably the most challenging of all 8 “wet spots” and it is not easy to see how the situation might be relieved except in a general way by attempting to take as much water as possible via an alternative route to the A308. Once again a comprehensive solution would involve a very costly large capacity storm drain running west along Dedworth Road to join another running north towards and under the A308.

Survey data is vague on many details of pipes etc in this area but in depth discussions with Landowners and Streetcare will hopefully produce some possibilities for improvement. We will pursue this in search of a solution for the long term - perhaps 2014 and beyond.